

CLAIMS:

1. A flexural pivot device, comprising:
a stationary member having a first and second surfaces,
a rotate-able member,
a first flexible member affixed between said first surface of said stationary member and said rotate-able member such that said first flexible member is preloaded in a curved form with an approximate center of curvature above said first surface of said stationary member, and
a second flexible member affixed between said second surface of said stationary member and said rotate-able member such that said second flexible member is preloaded in a curved form with an approximate center of curvature above said second surface of said stationary member.
2. A flexural pivot device of claim 1, wherein the first and second flexible members are made of a stainless steel alloy.
3. A flexural pivot device of claim 1, wherein the first flexible member is formed integral with the second flexural member.
4. A flexural pivot device of claim 1, wherein the first flexible member is affixed to the stationary member by a method selected from the group consisting of resistance welding, laser welding, ultrasonic welding, and radio-frequency welding.
5. A flexural pivot device of claim 1, wherein the first flexible member is formed integral with the stationary member.
6. A flexural pivot device of claim 1, wherein the first flexible member is formed integral with the rotate-able member.
7. A flexural pivot device, comprising:

a stationary member,

a rotate-able member having a first and second surfaces,

a first flexible member affixed between said stationary member and said first surface of said rotate-able member such that said first flexible member is preloaded in a curved form with an approximate center of curvature above said first surface of said rotate-able member, and

a second flexible member affixed between said stationary member and said second surface of said rotate-able member such that said second flexible member is preloaded in a curved form with an approximate center of curvature above said second surface of said rotate-able member.

8. A flexural pivot device of claim 7, wherein the first and second flexible members are made of a stainless steel alloy.

9. A flexural pivot device of claim 7, wherein the first flexible member is formed integral with the second flexural member.

10. A flexural pivot device of claim 7, wherein the first flexible member is affixed to the stationary member by a method selected from the group consisting of resistance welding, laser welding, ultrasonic welding, and radio-frequency welding.

11. A flexural pivot device of claim 7, wherein the first flexible member is formed integral with the stationary member.

12. A flexural pivot device of claim 7, wherein the first flexible member is formed integral with the rotate-able member.

13. A flexural pivot device, comprising:

a stationary member having a first and second surfaces,

a rotate-able member,

a first plurality of flexible members affixed between said first surface of said stationary member and said rotate-able member such that said first plurality of flexible members are preloaded in a curved form with an approximate center of curvature above said first surface of said stationary member, and

a second plurality of flexible members affixed between said second surface of said stationary member and said rotate-able member such that said second plurality of flexible members are preloaded in a curved form with an approximate center of curvature above said second surface of said stationary member.

14. A flexural pivot device, comprising:

a stationary member,

a rotate-able member having a first and second surfaces,

a first plurality of flexible members affixed between said stationary member and said first surface of said rotate-able member such that said first plurality of flexible members are preloaded in a curved form with an approximate center of curvature above said first surface of said rotate-able member, and

a second plurality of flexible members affixed between said stationary member and said second surface of said rotate-able member such that said second plurality of flexible members are preloaded in a curved form with an approximate center of curvature above said second surface of said rotate-able member.